

IN THE CLAIMS:

Please amend claims 1, 2, 4, 13, 18, 20, 23-26, 29-35, 46, 53-56, and 59-64 and cancel claims 36-37 without prejudice or disclaimer as follows.

1. (Currently Amended) A method comprising:

first determining for different nodes of a circuit arrangement one or more predetermined operations to execute;

second determining ~~signal classes and~~ one or more division criteria for ~~the signal classes~~ for dividing signals or signal components into signal classes;

dividing at least one of the signals or signal components according to the one or more division criteria ~~for~~ into the signal classes; and

executing the predetermined operations in the circuit arrangement nodes according to the signal classes,

wherein the circuit arrangement is at least substantially in accordance with a combined tree structure, wherein at least one tree branch performs transmitter tasks and at least one second branch performs receiver tasks, and in which circuit arrangement one or more nodes of different branches is connected in a predetermined manner.

2. (Currently Amended) A method comprising:

first determining for different circuit arrangement nodes at least one operation to execute and selecting a modification level from the circuit arrangement;

merging together nodes in the selected modification level and deleting irrelevant nodes and links between the nodes and/or adding Previously Presented links;

second determining ~~signal classes and~~ one or more division criteria ~~for the signal classes~~ for dividing the signals or signal components into signal classes;

dividing at least one of the signals or signal components according to the one or more division criteria ~~for~~ into the signal classes; and

executing the determined operations in the circuit arrangement nodes according to the signal classes.

3. (Cancelled)

4. (Currently Amended) A method comprising:

first determining for different nodes of a circuit arrangement one or more predetermined operations to execute;

second determining ~~signal classes and~~ one or more division criteria ~~for the signal classes~~ ~~for~~ dividing signals or signal components into signal classes;

dividing at least one of the signals or signal components according to the one or more division criteria ~~for~~ into the signal classes; and

executing the predetermined operations in the circuit arrangement nodes according to the signal classes,

wherein the circuit arrangement is at least substantially in accordance with a centralized loop such that at least two subtrees are connected to the loop, wherein at least

one subtree performs tasks of radio-frequency parts and at least one second subtree performs tasks of baseband parts.

5. (Previously Presented) The method of claim 1, wherein the signals or the signal components transfer packet-form data and the signal classes are indicated in a packet header.

6. (Previously Presented) The method of claim 1, wherein the nodes perform tasks of radio-frequency parts or baseband parts.

7. (Previously Presented) The method of claim 1, wherein the circuit arrangement is configured to transfer feedback information.

8. (Previously Presented) The method of claim 1, wherein said signals comprise signals to be modulated in different manners in one or more baseband nodes, wherein the modulated signals are divided into different signal classes.

9. (Previously Presented) The method of claim 1, wherein data can be transmitted from the nodes in unicast to one node or in multicast or broadcast to a plurality of nodes.

10. (Previously Presented) The method of claim 1, wherein network traffic load is monitored according to the signal classes.

11. (Previously Presented) The method of claim 1, wherein the signal classes constitute a hierarchic signal class system comprising one or more levels.

12. (Previously Presented) The method of claim 1, wherein inter-node links have a maximum capacity, wherein number and type of the transmitted signal classes can be altered.

13. (Currently Amended) The method of claim 1, wherein quality classes are defined, the signals are categorized into the predetermined quality classes, and the quality classes of the signals are a quality class is taken into account when the signal is clipped.

14. (Previously Presented) The method of claim 1, wherein the signals are divided into quality classes and signal power is measured in each of the quality classes.

15. (Previously Presented) The method of claim 1, wherein the signals having different requirements for modulation accuracy are divided into different signal classes.

16. (Previously Presented) The method of claim 1, wherein the signals are divided into different signal classes after at least one of spatial, temporal or frequency-level pre-processing.

17. (Previously Presented) The method of claim 1, wherein the signals are divided into different signal classes after interference cancellation pre-processing.

18. (Currently Amended) An apparatus comprising:

nodes arranged to perform at least one operation;

a ~~dividing unit~~ divider configured to ~~define signal classes and to divide~~ divide at least one or more signals or signal components according to one or more predetermined division criteria ~~for~~ into the signal classes; and

a ~~performing unit~~ circuitry configured to perform predetermined operations according to the signal classes,

wherein the apparatus is configured substantially in a combined tree structure, whereby at least one first tree branch performs transmitter tasks and at least one second branch performs receiver tasks, and wherein one or more nodes of different branches is are connected in a predetermined manner.

19. (Cancelled)

20. (Currently Amended) An apparatus comprising:

nodes arranged to perform at least one operation;

a ~~dividing unit~~ divider configured ~~to define signal classes and to divide~~ at least one or more signals or signal components according to one or more predetermined division criteria ~~for~~ the into signal classes; and

~~a performing unit~~ circuitry configured to perform predetermined operations according to the signal classes,

wherein the apparatus is configured substantially in a centralized loop such that at least two subtrees are connected to the loop, wherein at least one first subtree performs tasks of radio-frequency parts and at least one second subtree performs tasks of baseband parts.

21. (Previously Presented) The apparatus of claim 18, wherein the signals or the signal components transfer packet-form data and the signal classes are indicated in the packet header.

22. (Previously Presented) The apparatus of claim 18, wherein the nodes perform tasks of radio-frequency parts or baseband parts.

23. (Currently Amended) The apparatus of claim 18 further comprising a ~~transferring unit~~ transmitter configured to transfer feedback information.

24. (Currently Amended) The apparatus of claim 18, ~~further comprising a~~ wherein the divider is further dividing unit configured to divide the signals to be modulated in different manners into different signal classes.

25. (Currently Amended) The apparatus of claim 18, further comprising a ~~transmitting unit-transmitter~~ configured to transmit data from the nodes to one node or a plurality of nodes.

26. (Currently Amended) The apparatus as claimed in claim 18, further comprising a ~~monitoring unit-monitor~~ configured to monitor network traffic load according to the signal classes.

27. (Previously Presented) The apparatus of claim 18, wherein the signal classes constitute a hierarchic signal class system comprising one or more levels.

28. (Previously Presented) The apparatus of claim 18, wherein links between the nodes have a maximum transfer capacity, wherein a number and a type of the transferred signal classes can be altered.

29. (Currently Amended) The apparatus of claim 18, ~~wherein wherein quality~~
~~classes are defined and the signals are divided into predetermined quality classes, and~~
~~wherein the apparatus further comprising comprise an accounting unit-circuitry~~
configured to take into account ~~the quality class-classes~~ when one of the signals is clipped.

30. (Currently Amended) The apparatus of claim 18, wherein quality classes are defined and the divider is further ~~further comprising a dividing unit~~ configured to divide the signals into predetermined quality classes and measuring signal power in each of the quality classes.

31. (Currently Amended) The apparatus of claim 18, further comprising a ~~control unit, which controls~~ controller configured to control the division into signal classes.

32. (Currently Amended) The apparatus of claim 18, ~~further comprising a dividing unit~~ wherein the divider is further configured to divide signals having different requirements for modulation accuracy into different signal classes.

33. (Currently Amended) The apparatus of claim 18, ~~further comprising means for dividing~~ wherein the divider is further configured to divide the signals into different signal classes after at least one of spatial, temporal or frequency-level pre-processing.

34. (Currently Amended) The apparatus of claim 18, wherein the divider is further ~~further comprising a dividing unit~~ configured to divide the signals into different signal classes after interference cancellation pre-processing.

35. (Currently Amended) A computer program embodied on a computer readable medium, the computer readable medium storing code comprising computer executable instructions comprising:

first determining for different nodes of a circuit arrangement one or more predetermined operations to execute;

second determining ~~signal classes and~~ one or more division criteria for ~~the~~ signal classes for dividing signals or signal components into signal classes;

dividing at least one of the signals or signal components according to the one or more division criteria for the signal classes; and

executing the predetermined operations in the circuit arrangement nodes according to the signal classes,

wherein the circuit arrangement is at least substantially in accordance with either (a) a combined tree structure, wherein at least one tree branch performs transmitter tasks and at least one second branch performs receiver tasks, and in which circuit arrangement one or more nodes of different branches is connected in a predetermined manner; or (b) a centralized loop such that at least two subtrees are connected to the loop, wherein at least one subtree performs tasks of radio-frequency parts and at least one second subtree performs tasks of baseband parts.

36-37. (Cancelled)

38. (Previously Presented) The method of claim 4, wherein the signals or the signal components transfer packet-form data and the signal classes are indicated in a packet header.

39. (Previously Presented) The method of claim 4, wherein the nodes perform tasks of radio-frequency parts or baseband parts.

40. (Previously Presented) The method of claim 4, wherein the circuit arrangement is configured to transfer feedback information.

41. (Previously Presented) The method of claim 4, wherein said signals comprise signals to be modulated in different manners in one or more baseband nodes, wherein the modulated signals are divided into different signal classes.

42. (Previously Presented) The method of claim 4, wherein data can be transmitted from the nodes in unicast to one node or in multicast or broadcast to a plurality of nodes.

43. (Previously Presented) The method of claim 4, wherein network traffic load is monitored according to the signal classes.

44.(Previously Presented) The method of claim 4, wherein the signal classes constitute a hierarchic signal class system comprising one or more levels.

45. (Previously Presented) The method of claim 4, wherein inter-node links have a maximum capacity, wherein number and type of the transmitted signal classes can be altered.

46. (Currently Amended) The method of claim 4, wherein quality classes are defined, the signals are categorized into the predetermined quality classes, and the quality classes of the signals are ~~a quality class is taken into account when the signal is clipped.~~

47. (Previously Presented) The method of claim 4, wherein the signals are divided into quality classes and signal power is measured in each of the quality classes.

48. (Previously Presented) The method of claim 4, wherein the signals having different requirements for modulation accuracy are divided into different signal classes.

49. (Previously Presented) The method of claim 4, wherein the signals are divided into different signal classes after at least one of spatial, temporal or frequency-level pre-processing.

50. (Previously Presented) The method of claim 4, wherein the signals are divided into different signal classes after interference cancellation pre-processing.

51. (Previously Presented) The apparatus of claim 20, wherein the signals or the signal components transfer packet-form data and the signal classes are indicated in the packet header.

52. (Previously Presented) The apparatus of claim 20, wherein the nodes perform tasks of radio-frequency parts or baseband parts.

53. (Currently Amended) The apparatus of claim 20 further comprising a ~~transferring unit~~ transmitter configured to transfer feedback information.

54. (Currently Amended) The apparatus of claim 20, wherein the divider is further ~~further comprising a dividing unit~~ configured to divide the signals to be modulated in different manners into different signal classes.

55. (Currently Amended) The apparatus of claim 20, further comprising a ~~transmitting unit~~ transmitter configured to transmit data from the nodes to one node or a plurality of nodes.

56. (Currently Amended) The apparatus as claimed in claim 20, further comprising a ~~monitoring unit~~ monitor configured to monitor network traffic load according to the signal classes.

57. (Previously Presented) The apparatus of claim 20, wherein the signal classes constitute a hierarchic signal class system comprising one or more levels.

58. (Previously Presented) The apparatus of claim 20, wherein links between the nodes have a maximum transfer capacity, wherein a number and a type of the transferred signal classes can be altered.

59. (Currently Amended) The apparatus of claim 20, wherein ~~wherein~~ quality classes are defined and the signals are categorized into the predetermined quality classes, and wherein the apparatus further ~~comprising~~ comprises an accounting ~~unit~~ circuitry configured to take into account the quality class ~~classes~~ when one of the signals is clipped.

60. (Currently Amended) The apparatus of claim 20, further comprising a ~~measuring unit~~ measurer configured to measure signal power, wherein the signals are divided into quality classes and the signal power is measured in each of the quality classes.

61. (Currently Amended) The apparatus of claim 20, further comprising a ~~control unit, which controls~~ controller configured to control the division into signal classes.

62. (Currently Amended) The apparatus of claim 20, wherein the divider is further ~~further comprising a dividing unit~~ configured to divide signals having different requirements for modulation accuracy into different signal classes.

63. (Currently Amended) The apparatus of claim 20, wherein the divider is further ~~further comprising a dividing unit~~ configured to divide the signals into different signal classes after at least one of spatial, temporal or frequency-level pre-processing.

64. (Currently Amended) The apparatus of claim 20, wherein the divider is further ~~further comprising a dividing unit~~ configured to divide the signals into different signal classes after interference cancellation pre-processing.